Canyon Fuel Company, LLC
A Subsidiary of Wolverine Fuels, LLC

Skyline Mine
Gregg A. Galecki, Sr. Environmental Engineer
HC35, Box 380
Helper, Utah 84526
(435) 448-2636
Fax (435) 448-2632

January 2, 2020

Steve Christensen
Coal Program Supervisor
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

RE: Removal of North of Graben Shaft from permit, Canyon Fuel Company, LLC, Skyline Mine, C/007/005

Dear Mr. Christensen:

Attached is information submitted to remove the North of Graben Shaft from the permit. As discussed, the shaft and related surface facilities were never constructed. Skyline Mine is no longer mining in the district and there is no intentions to mine in the region in the future.

Attached to this cover letter are completed C1 and C2 forms, and .pdf files of the information to be incorporated into or deleted from the M&RP. The information is being submitted electronically. Two (2) hard copies will be sent upon Division approval.

If you have any questions, please call me at (435) 448-2636.

Sincerely,

Gregg A. Galecki
Sr. Environmental Engineer, Skyline Mine
Canyon Fuel Company, LLC

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐

Permittee: Canyon Fuel Company, LLC
Mine: Skyline Mine **Permit Number:** C/007/005
Title: Removal of North of Graben Shaft
Description, Include reason for application and timing required to implement:
Removal of the North of Graben Shaft from the permit - construction never took place

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

☒ Yes ☒ No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: 3.0 ☐ increase ☒ decrease.
☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# _____
☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
☒ Yes ☐ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes ☒ No 6. Does the application require or include public notice publication?
☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: _____
☐ Yes ☒ No 11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
☐ Yes ☒ No 13. Does the application require or include collection and reporting of any baseline information?
☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☐ Yes ☒ No 15. Does the application require or include soil removal, storage or placement?
☐ Yes ☒ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☐ Yes ☒ No 17. Does the application require or include construction, modification, or removal of surface facilities?
☐ Yes ☒ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
☐ Yes ☒ No 19. Does the application require or include certified designs, maps or calculation?
☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
☐ Yes ☒ No 21. Have reclamation costs for bonding been provided?
☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes ☒ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations herein.

Corey Heaps
Print Name

Co Heaps, GM, 1-2-20
Sign Name, Position, Date

Subscribed and sworn to before me this 2 day of Jan, 2020

Melissa S Willden
Notary Public

My commission Expires: 3-19-2023

Attest: State of Utah } ss:
County of Carbon

MELISSA S. WILLDEN
NOTARY PUBLIC • STATE OF UTAH
COMMISSION# 705119
COMM. EXP. 03-19-2023

For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: Canyon Fuel Company, LLC
Mine: Skyline Mine **Permit Number:** C/007/005
Title: North of Graben Shaft removal from permit

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☒ Replace	☐ Remove	Chapter 1, pages 1-37, 1-38
☐ Add	☒ Replace	☐ Remove	Chaper 1, Plate 1.6-3 Rev.13 1-2-2020
☐ Add	☒ Replace	☐ Remove	Chapter 2, Section 2.7 page 2-63a, Section 2.9 page 2-104k, Section 2.10 page 2-111b
☐ Add	☒ Replace	☐ Remove	Chapter 2, Section 2.11 page 2-120l, Section 2.12 page 2-128
☐ Add	☒ Replace	☐ Remove	Chapter 2, Plate 2.7.1-2 Rev 2 1-2-2020
☐ Add	☒ Replace	☐ Remove	Chapter 3, Section 3.2 pages 3-31(b). 3-72(c)
☐ Add	☐ Replace	☒ Remove	Chapter 3, Remove Plate 3.2.4-5A through Plate 3.2.4-5D
☐ Add	☒ Replace	☐ Remove	Chapter 4, Section 4.2 Table 4.2-1, Section 4.4 page 4-28, Section 4.6 page 4-34(b), 4-38(d), 4-41(e)
☐ Add	☒ Replace	☐ Remove	Chapter 4, Section 4.7 page4-50(a), Section 4.9 page 4-62(a)
☐ Add	☐ Replace	☒ Remove	Chapter 4, Section 4.9 remove Figure 4.9-D
☐ Add	☒ Replace	☐ Remove	Chapter 4, Section 4.11 page 4-72, Section 4.12 Table 4.12-1, Section 4.18 page 4-103B
☐ Add	☒ Replace	☐ Remove	Chapter 4, Section 4.20 page 4-114(a)
☐ Add	☐ Replace	☒ Remove	Chapter 4, Remove Plate 4.4.2-5A, Plate 4.4.2-5B
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.

Submitted electronically. Hard copies will be shipped for incorporation following approval.

Received by Oil, Gas & Mining

Vertical Extent of Mine Workings Workings (Life of Mine)	Surface to 1,500' max	Surface to 2,300' max	Surface to 1,500' max

The anticipated number of total surface land acres to be affected (life of mines) is less than the combined total of the affected acreages for each of the three mines due to the overlapping of mining operations which is inherent to this multi-seam mining operation. The total surface acreage to be disturbed by surface facilities associated with underground mining is 139.81 acres.

The following information was based on projection for the next five years (2012-2016).

	Mine No. 1	Mine No. 2	Mine No. 3
Extent of Horizontal Workings	240 acres	375 acres	1,400 acres
Extent of Vertical Workings	Surface to 1,250'	Surface to 2,250'	Surface to 2,125'

Permit Area

The construction/installation of surface facilities at the mine site, loading area, conveyor belt route, well houses, water tank pad, waste rock disposal site, and South Fork Breakout, and Winter Quarters Ventilation Facility comprise the Permit Area. The permit area acreage listed adequately accommodate areas of disturbance.

PERMIT AREAS TO BE RECLAIMED

AREA	ACREAGE
Loadout	13.86
Portal Yard	42.55
Water tanks, water lines, and Well pads (water lines not reclaimed	0.60
Conveyor Bench	14.18
Waste Rock Disposal Site and Road	32.48
South Fork Breakout	0.60
James Canyon Buried Power Line	0.30
James Canyon Buried Pipeline	1.60
James Canyon Water Wells and Road	2.95
Winter Quarters Ventilation Facility	7.93
Winter Quarters Road (not reclaimed)	4.90
~~North of Graben (NOG) Shaft~~	~~3.00~~
Swens Power line (not reclaimed)	4.80
Swens Canyon Pad	9.70
TOTAL	~~139.45~~136.45

Legal Description of Permit Area

Township 12 South, Range 6 East, SLBM

Section 26: Portions of SW1/4SW1/4
~~Section 34: Portions of NE1/4NE1/4~~

Township 12 South, Range 7 East, SLBM

Section 32: Portion SE1/4SE1/4

Township 13 South, Range 6 East, SLBM

Section 1: Portions of S1/2NW1/4, S1/2NE1/4
Section 13: Portions of S1/2S1/2
Section 23: Portions of E1/2E1/2, SW1/4SE1/4
Section 24: Portions of N1/2
Section 25: Portions of S1/2S1/2
Section 26: Portions of NW1/4NE1/4, N1/2NW1/4, SW1/4NW1/4
Section 27: Portions of the S1/2NE1/4, S1/2NW1/4
Section 35: Portions of NE1/4, S1/2
Section 36: Portions of N1/2NW1/4

Township 13 South, Range 7 East, SLBM

Section 4: Portions of SW1/4NW1/4, NW1/4SW1/4
Section 5: Portions of E1/2NE1/4
Section 6: Portions of S1/2N1/2
Section 17: Portions of S1/2S1/2
Section 18: Portions of S1/2S1/2
Section 19: Portions of N1/2N1/2

Township 14 South, Range 6 East, SLBM

Section 2: Portions of W1/2NW1/4
Section 3: Portions of SE1/4NE1/4

See Plate 1.6-3 for graphic illustration of Permit Area

~~2.7.9 North of Graben (NOG) Bleeder Shaft~~

~~The NOG Bleeder Shaft is constructed to provide adequate ventilation for completion of the North of Graben mining district. The shaft was necessary due to encountered geologic conditions that required turning two (2) separate mining districts into one (1). The facility will include one (1) 5-foot diameter, unlined shaft. The area permitted for the bleeder shaft is approximately 3.0 acres, with a disturbed area of approximately 1.7 acres. Both soils and vegetation information specific to the site were collected in 2014 prior to construction. In general the NOG Bleeder Shaft site encompasses a mix of musk thistle, cheatgrass, bluebunch wheatgrass, and aspen on south-facing hillside located approximately 200 feet downhill from the existing Granger Ridge USFS road. A portion of the new access road will be constructed is located in an aspen area that had been disturbed previously by other activities, and appears to have been later re-seeded. Attempts were made to minimize the size of the pad utilizing the existing flat areas adjacent to the USFS road, but geologic conditions prohibited placing the shaft on the road. No threatened or endangered species were identified. The vegetation report is located in Appendix A-2, Volume 2 (Vegetation of the NOG Ventilation Site 2014, Mt Nebo Scientific).~~

2.7.9 Swens Canyon Ventilation Facility

The Swens Canyon Ventilation Facility (SCVF) was necessary to provide both ventilation and power for underground mining in the Flat Canyon Lease – Southwest Reserves portion of the mine. Both soils and vegetation information specific to the SCVF site were collected in 2014 prior to construction. In general, the SCVF pad site encompasses a sagebrush and mountain brush south-facing hillside. The existing access road up Swens Canyon was modified slightly, moving it closer to the creek to better utilize a generally flat portion of the valley upland area to minimize the disturbance of constructing the SCVF access road. No riparian vegetation was disturbed. No threatened or endangered species were identified. The vegetation report is located in Appendix A-2, Volume 2 (Vegetation of the Powerline Corridor & Swens Canyon Pad 2014, Mt. Nebo Scientific).

2.7.10 Flat Canyon Lease Area

The Flat Canyon Environmental Impact Statement (EIS) prepared by the US Forest Service (USFS) and the Bureau of Land Management (BLM) in 2002 determined there were no threatened and endangered, or sensitive species present in the lease area. In February 2013, Allen Rowley, Acting Forest Supervisor for the Manti LaSal National Forest determined the 2002 EIS was current and did not need additional updating. As described in the EIS the area is comprised of approximately 2.5% grasslands, 2% meadows/wetlands, 24% sagebrush/grass, 27.5% conifer-timber, and 44% aspen (Flat Canyon Coal Lease Tract – Final Environmental Impact Statement (FEIS), January 2002, (Section3.17 pg. 3-25. Included as Figure 2.7.9-1 (pg. 2-63b) is FEIS Figure 3.5 Vegetation Types which illustrates and broadly defines the location of vegetation communities. The EIS considered surface disturbance, there is no surface disturbance currently proposed in the Southwest Reserve Flat Canyon lease area and no impacts to the existing vegetation are Mine Vegetative Analysis of Seven Proposed Drill Sites and Seven Reference Site" is included in Appendix A-2, Volume 2. The report not only provides reference areas spread throughout the area, it also includes federally listed threatened, endangered, Candidate, and Sensitive Species for Emery and Sanpete County indicating none of the species listed are found within the project area.

Habitat Loss

The amount of habitat loss due to surface disturbance is minimal when considering the extent of similar surrounding habitat, and areas of contemporaneous reclamation that were previously disturbed prior to the current mining activities. Disturbed areas will be minimized to approximately 3 acres as the area is contemporaneously reclaimed. Noise and human activity in the expansion area is consistent with the historic mining activities. Also, wildlife studies indicates the surrounding area is used as a migratory route between summer and winter ranges. Enhancement measures at reclamation will include the planting of seeds and woody species seedlings that are diverse and palatable to wildlife, and a pond to be used by both wildlife and livestock. The pond is being left intact at the landowner=s request - historically the pond has only periodically retained a very limited water supply.

~~2.9.7 WILDLIFE OF THE NORTH OF GRABEN (NOG) BLEEDER SHAFT~~

~~The NOG Bleeder Shaft is within the North Lease where multiple wildlife surveys have been conducted. Tables 2.9-1 through 2.9-3 provide a historic species list of mammals, amphibians, and reptiles whose published ranges exist in the general area of the Skyline Mine. Tables 2.9-4 and 2.9-5 have been updated (2015) to include the federally listed threatened, endangered, candidate, and sensitive species in Carbon, Emery, and Sanpete Counties. In addition, Figure 2.9.3-A has been modified and updated and Figures 2.9.3-B, 2.9.3-C, & 2.9.3-D have been added to illustrate the endangered mammalian species in relation to the Skyline Mine lease areas. Table 2.9-4, Threatened, Endangered, and Candidate species list has been updated. Table 2.9-5, Utah Sensitive Species List has been updated. Table 2.9-7, has been added which summarized the Threatened, Endangered, and Candidate species likely to occur in the entire lease area. This table was generated from data included in the US Fish & Wildlife Service Information Planning and Conservation (IPaC) Trust Resource Report for Skyline Mine Lease area. (See IPaC Report in Appendix A-2, Volume 2). The Yellow-billed cuckoo has recently been listed at Threatened. Although the IPaC report and county list indicates the possibility of their presence, the project area is above the known elevation range of the species, and there is no suitable habitat in the area. (See Appendix A-2, Volume 2 for Alpine memo dated July 2015).~~

July 1, 2005. Details of the method of the survey are outlined in Appendix A-2, ABiological Studies in Winter Quarters Canyon Creek and Woods Canyon Creek - A Study Plan@. Results of the survey will be provided in Appendix A-2, Volume 2 when completed.

Raptor surveys were conducted in 2005, 2007, 2008, 2009, 2011, and 2013 in the Winter Quarters area associated with drilling programs. Those surveys and the presence or lack of presence of raptors has not prohibited our work in the area. The raptor surveys are located with the respective exploration permits for each year. A summary report addressing the affects on raptors with the addition of the Winter Quarters Ventilation Facility is included in Appendix A-3, Volume 2. In 2009, an additional survey of the Northern goshawk, flammulated owl, and other comprehensive wildlife was conducted with similar results. No long term detrimental affects associated with the ventilation facility are anticipated. The 2011 survey identified a newly established goshawk nest in the lease modification area. This nest will continue to be monitored in future annual surveys, with additional lands to be monitored as mining advances in the North Lease modification area.

~~The North of Graben (NOG) Bleeder Shaft area is within the North Lease area and has been monitored for raptors on an annual basis. Based on the 2014 survey, no raptors will be affected by the proposed construction of the shaft. A specific raptor survey was conducted in 2014 specifically for the NOG Bleeder Shaft area with no nests being found. See Appendix A-2, Volume 2 for Alpine Ecological report.~~

THREATENED & ENDANGERED SPECIES

No threatened or endangered species have been documented in studies surrounding the Winter Quarters Ventilation Facility that would prohibit construction. See Appendix A-2, Volume 2 and Appendix A-3, Volume 2 for reports.

Because no surface disturbance in planned for the North Lease Tract Area, no impact to endangered, threatened, or otherwise sensitive species should occur.

~~North of Graben (NOG)Bleeder Shaft~~

~~A detailed description of the soils associated with the NOG Bleeder Shaft is available in Appendix A-2, Volume 2, titled, "Order 2 Soil Survey of the North of Graben (NOG) Bleeder Shaft Area" (January 16, 2015). The survey conducted by Long Resources Consultants, Inc. provides a comprehensive assessment of the various soils within the area. The permit area encompasses approximately 3.0 acres. The soil type is represented by the McCadden Family, with shallow soil depths overlying shallow sandstone bedrock. It is considered to have good to fair available water capacity, and fair to good reclamation material with pH values ranging 6.2 – 7.0 and a saturation range of 44.1 – 72 percent. The soil pit (14SKY07) sampled at the site location identified a rich A horizon of approximately 4 inches. The entire A horizon will be salvaged. Where there is less than six inches in the A horizon, up to 4 inches of the subsoil (Bw1 horizon) will be collected and stockpiled for reclamation. Quality control for the salvage of the topsoil will be primarily by color conducted under the guidance of trained personnel. To confirm the nutrient status of the topsoil, an analysis of the available nitrogen, phosphorus, and potassium will be conducted once the material is placed in the topsoil pile. At post construction of the site, an as-built survey of the site will be conducted to confirm the amount of topsoil salvaged.~~

Swens Canyon Ventilation Facility (SCVF)

A detailed description of the soils associated with the Swens Canyon Ventilation Facility (SCVF) and associated power line is available in Appendix A-2, Volume 2, titled, "Order 2 Soil Survey of the Powerline Corridor Swens Pad Ventilation and Escape Shafts Coal Pile Expansion at the Skyline Mine" (December 2014). The survey conducted by Long

TABLE 2.12.2-1
GRAZING POTENTIAL FOR THE AREA TO BE AFFECTED BY MINING SURFACE OPERATIONS AND FACILITIES
(Does not include State Highway SR-264)

	Surface Facilities Area	General Area Classificatior	Land Area (Acres)	Average Forage Production (lbs/ac)	Total Animal Unit Month (AUM)	Grazing Potential-Animal Unit Month (AUM) with 25% Harvest Efficiency for proper grazing utilization
1	Portal Yard Area	Spruce Fir	16.47	0	0.0	0.00
		Aspen	7.93	586	5.9	1.47
		Sagebrush	2.50	917	2.9	0.73
		Disturbed	8.50	0	0.0	0.00
		Riparian	1.00	182	0.2	0.06
	Subtotal		36.40		9.0	2.25
2	Conveyor Corridor	Aspen	3.20	586	2.4	0.59
		Sagebrush	5.77	917	6.7	1.67
	Subtotal		8.97		9.1	2.27
3	Railroad Loadout Area	Grass-Forb	10.32	746	9.7	2.44
		Spruce Fir	3.50	0	0.0	0.00
		Riparian	0.04	182	0.01	0.00
	Subtotal		13.86		9.8	2.44
4	Waste Rock Disposal Are	Disturbed	12.81	0	0.0	0.00
	Subtotal		12.81		0.0	0.00
5	Water Tank & Well Pads	Aspen	0.26	586	0.2	0.05
	South Fork Breakout	Spruce-Fir	0.96	0	0.0	0.00
	Subtotal		1.22		0.2	0.05
6	WQ Vent Pad	Sagebrush	2.36	1300	3.9	0.97
	Subtotal		2.36		3.9	0.97
7	NOG Bleeder Shaft	Grass-Aspen	3.00	586	2.2	0.56
	Subtotal		3		2.2	0.56
8	Swens Vent Pad	Sagebrush	9.7	917	11.3	2.81
	Subtotal		9.7		11.3	2.81
9	Powerline	Aspen	6.3	586	4.7	1.17
	Subtotal		6.3		4.7	1.17
	TOTAL		94.62		50.13	12.52

Revised 7-23-2015

~~North of Graben (NOG) Bleeder Shaft~~

~~The NOG Bleeder Shaft is constructed to provide adequate ventilation for completion of the North of Graben mining district. The shaft was necessary due to encountered geologic conditions that required turning two (2) separate mining districts into one (1). An associated fan will be powered from within the mine, with the exception of during startup of the fan where a diesel-powered generator will be used to start the fan. The approximately 3.0 acre permitted area will include an access road, a 50-foot by 80-foot pad housing a fan, and a topsoil storage area. On the existing road located approximately 200-ft uphill from the pad, a second smaller fenced area approximately 25-foot by 40-foot will include a generator housed in a shed and a 300-gallon fuel tank housed in a secondary containment for spills. There is no associated sediment pond due to the small nature of the site, and a sediment collection area located on the pad that is designed to let water leave the site through a culvert once sediment has been retained. Total acreage draining to the pad is 0.8 acres. The peak flow in the road ditch resulting from a 10-year, 24-hour event is estimated at 1.86 cfs, with a maximum velocity of 4.97 fps. The ditch will be lined with D50 riprap of 3-inch rock. The site is considered an Alternate Sediment Control Area (ASCA). Plates 3.2.4-5A through 3.2.4-5C illustrate the pad and road designs, cross sections, and watersheds of the site. Located in Appendix A-5, Section 25 are two (2) reports outlining both the hydrologic design and slope stability of the pad, topsoil pile, and road.~~

~~Sediment control structures used during construction such as silt fencing and straw bales will remain in place for one year after construction and will be removed anytime thereafter. Erosion control blankets, wattles, or straw bales will be used to control erosion during interim vegetation establishment.~~

~~During both construction and during any operational use of the roads, dust will be controlled to comply with the existing Air Quality permit. Section II.B.1.i of said permit indicates visible emissions will not exceed 20% opacity, and shall be treated using water or chemically treated for dust control (Section II.B.1.k). See Appendix A-1 for complete Air Quality permit DAQE-AN100920001-15. Road access to USFS road 0221 – Granger Ridge road will be uninterrupted during construction as the road will be diverted slightly to the north of its original location prior to construction and while facilities are adjacent to the road. Road 0221 has very little traffic as it terminates approximately ½ mile east of the facility. The minimal footprint of the facility that is immediately adjacent to the road will be secured with a chain link fence. The road will be returned to the original location at reclamation.~~

Revised: ~~9-18-15~~1-2-2020

3-31(b)

INCORPORATED
07/29/10
Division of Oil, Gas & Mining

Swens Canyon Ventilation Facility

The Swens Canyon Ventilation Facility (SCVF) and Power Line project are needed for the future of the Skyline Mine for multiple reasons. The 3-phase, 12.5 kV, single pole power line, with compact construction is necessary to supply the power needs as mining moves southwest. Attempts to supply the power through

Area 39. This 1.01 acre area addresses both the undisturbed area between the upper undisturbed ditch (UDW-4 from Earth Fax report) and the primary portion of the WQVF access road (DW-5 from Earth Fax report). Sediment from the area is controlled by a catch basin that incorporates a wattle to trap sediment prior entering a culvert taking water under the road (Plate 3.2.4-3A). The ditch has been widened in the vicinity of catch basin to accommodate the installation of the wattles. The outfall of the culvert, although not having a erosive velocity, is armored with riprap to further reduce any sediment loading.

~~**Area 40:** The NOG Bleeder Shaft pad is an area that addresses runoff from both small undisturbed area UW1, and disturbed areas DW3, DW5, and DW6 that include the cutbank/highwall, road, and pad. The area contributing runoff to the pad is approximately 0.8 acres. The pad is designed to slope back (or north) into the northwest section of the pad. Water will be able to collect and drop out sediment prior to being discharge off the site via a culvert. Sediment can reach a height of 0.40 feet prior to needing cleaning which will accommodate approximately 160 cu-ft of sediment storage. See Appendix A-5, Section 25 for the Earthfax Hydrology Design report.~~

Area 40: The Swens Canyon Ventilation Facility pad is an area that addresses both a small undisturbed area (UW3) and the pad (DW3) totaling 1.5 acres (Plate 3.2.4-4D). Storm water runoff and sediment from the area flows to the east-southeast area of the pad. Water and sediment reaching the east side of the pad will either be treated by a silt fence or directed to the south portion of the pad using a berm. Water and sediment reaching the south end of the pad is controlled by a swale and small catch basin located at the southern portion of the pad. At that location, the small amount of water will collect to a maximum depth of 1.28-inches and eventually evaporate. The maximum design velocity is 1.02 ft/sec which is not considered erosive. See Attachement A of Earthfax Swens Canyon Design Report in Appendix Volume 5, Engineering Calculations, Section 24 for details.

Area 41: The Swens Canyon Ventilation Facility Topsoil Pile is designed to safely retain runoff from a 100-year, 24-hour storm event (176 cu-yds.) and one year of predicted sediment yield (195 cu-yds.) Topsoil will be collected/contained in the sediment basin and will either be retained in-place or re-deposited on the pile. Once vegetation is established on the Topsoil Pile, the sediment yield will be significantly reduced. Plate 3.2.4-4D illustrates the area.

On all areas not reporting to a sediment pond, and classified as Alternate Sediment Control Areas, the alternate sediment control measure such as straw bales, silt fences, catch basins, excelsior mats, etc. will be maintained until there is adequate vegetative cover to properly filter any surface runoff (see Sec. 20, Vol. 5 for design). When this can be demonstrated, the alternate control measures will be removed and the area reclassified as an "Exempt area". (See Sec. 21, Vol. 5 for Demonstrations) On all areas classified as Exempt Areas, if they should become redisturbed they will be reclassified as ASCA areas and will have the runoff treated with a designed treatment.

TABLE 4.2-1

RECLAMATION TIMETABLE

Task		Phase I		Phase II					Phase III			Phase IV
	Recovery of Underground Equipment											
	Seal Mine Portals											
	Remove Winter Quarters Fan and housing											
	Remove Swens Canyon Shaft and housing											
Demolition												
	Mine Site - Lower Bench											
	Winter Quarters Ventilation Facility											
	Mine Site - Middle Bench											
	Mine Site - Upper Bench											
	Overland Conveyor											
	Rail Loadout Facilities											
	Remaining Facilities (pump houses, wells, water tanks)											
Earth Work												
	Seal and Backfill Winter Quarters Mine Openings											
	Install Interim Sediment Control											
	Backfill and Compact											
	Remove Sedimentation Ponds											
	Topsoil Replacement											
	Back fill and compact Swens Canyon Shaft											
	Revegetation											

4.4.2 Grading and Final Contour

All highwalls and cutslopes will be reclaimed using geotechnically stable fill slopes with surfaces that have been sufficiently roughened with deep gouging. The operational bench slopes will be graded back to the approximate original contour at a two horizontal to one vertical slope (2h:1v) or shallower upon abandonment, utilizing a bulldozer working along the slopes. A geotechnical analysis will be made of this slope at the time of reclamation and design adjustment made as necessary to insure slope stability. The sediment pond at the portal area will be removed during the initial reclamation phase.

The reclamation plan is shown on in maps 4.4.2-1A, 4.4.2-1AA. 4.4.2-1B. 4.4.2-1BA, 4.4.2-1B1 and 4.4.2-1AC. Costs and mass balance data associated with reclamation may be found in the Engineering Calculations, Volume 5.

Grading operations will be possible at the railroad load-out site which will be returned to the approximate original contour and shown on Maps 4.4.2-1C and 4.4.2-1D. Water Tank final reclamation contours are shown on Maps 4.4.2-1E and 4.4.2-1F. The waste rock disposal site final reclamation contours are shown on Map 4.16.1-1B.

The Winter Quarters Ventilation Facility grading and final contour plan will be similar to the sites listed above. Once excess material has been used in sealing the slope and shaft as outlined in Sections 4.1.2 and 4.9, any retaining walls, highwalls or cutslopes will be reclaimed using geotechnically stable fill slopes with the final surface being roughened with deep gouging. The pad will be graded back to the approximate original contour, unless the post-mining land use changes. The sedimentation pond will be removed once sufficient re-contouring of the pad has taken place. See Plates 4.4.2-3A and 4.4.2-3B for the reclaimed site configuration.

~~The North of Graben (NOG) Bleeder Shaft is similar to all previously listed sites. Once the shaft has been filled as outlined in 4.1.2 and 4.9, any cut slopes will be reclaimed with the final surface being roughened with deep gouging. The pad will be graded back to the original contour. Plates 4.4.2-5A and -5B illustrate the reclaimed surface.~~

The Swens Canyon Ventilation Facility will continue with the grading and contour plans listed above, using geotechnically stable fill slopes. Material generated during construction of the shafts and stored in the cuttings pond area, will be used as backfill for the shafts following the backfill designs located in Section 4.9 and Figure 4.9-B. The pad will be graded back to the approximate original contour. The small section of the USFS road that was rerouted for access to the pad will be re-established in its former location. Plates 4.4.2-4A and 4.4.2-4B illustrate the proposed final reclamation designs.

~~Topsoil to be removed from the North of Graben (NOG) Bleeder Shaft area will be collected from the disturbed area as construction advances. Based on the Order 2 Soil survey (See Appendix A-2, Long Resources Consultants, Inc.) the depth of suitable topsoil will be approximately 4-inches from the A-horizon and up to 4-inches of the B-horizon if necessary. Construction will take place predominantly on the south-facing slope (Soil Profile 14SKY07) dominated by quaking aspen, mountain big sagebrush and grasses. Brush and topsoil will be salvaged simultaneously and stored in the designated topsoil storage area. Larger trees will be placed in a brush pile within the disturbed area to be redistributed at reclamation. A small portion of the existing US Forest service road will be re-routed to utilize flat, previously disturbed areas adjacent to the road. The northslope is dominated by Englemann spruce, and other conifers.~~

~~The soils identified in the survey are classified as loam and sandy-loam. The slope is 41 percent. The taxonomic classification is McCadden family, lithic Haplocryolls loamy-skeletal, mixed superactive. At site 14SKY07, which is most representative of the site, the EC values range from 0.23-.037dS/m, Sodium Absorption Ration (SAR) 0.14-0.21, and an estimated Available Water Capacity range of 0.76-1.35 in/ft. - all acceptable ranges to use the available material. The topsoil stockpile is designed to store approximately 1,129 cu-yds of material, and an as-built survey of the pile and site will be conducted at post-construction to confirm the amount of material salvaged. The topsoil stockpile will be located at the west end of the disturbed area where the pad access road leaves the USFS road (See Plates 3.2.4-5A through -5C). Prior to re-distribution, a sampling of the nutrient content (N:P:K)will be conducted to deterimine the need for fertilizer application when compared to the baseline information. See Section 4.6.3 for Topsoil Protection measures.~~

The topsoil and subsoil from the Swens Canyon Ventilation Facility (SCVF) area will be collected from the disturbed area as construction advances. Prior to construction, soil samples will be collected from the A and B horizion at sample locations 14SKY14 and 14SKY15 and analyzed for available nutrients nitrogen, phosphorus, and potassium per DOGM 2008 guidelines. The associated soil survey (see Appendix A-2, Volume 2) the depth of topsoil ranges from approximately 0.83 to 1.3 feet. It is estimated approximately 8,750 cu-yds of topsoil and 6,350 cu-yds of subsoil will be collected and stored. The total topsoil, subsoil removal will store approximately 15,100

TABLE 4.6-4 (Continued)
TOPSOIL REDISTRIBUTION

	Acreage	Planned Depth Inches	Cubic Yds
Overland Conveyor Route	.39	12	629 (Private)
~~NOG Bleeder Shaft~~	~~1.7*~~	~~19~~	~~4,388 (USFS)~~
~~*1.7 acres is only the disturbed area. The permit area encompasses approximately 3.0 acres.~~			
Swens Canyon Ventilation Facility North Slope	5.4****	12	8755 (USFS)
			48,056 (Private)
			~~90,607~~86,219 (USFS)
GRAND TOTAL	~~65.70~~64.0		~~138,663~~134,245**

*Both of these areas are located on National Forest lands and 78,593 cubic yards of National Forest topsoil was removed and stored from these area. The topsoil over and above that planned for redistribution that came from National Forest lands will be redistributed on National Forest lands, as directed by the Manti-LaSal National.

**81,852cubic yards are need for revegetation on National Forest lands and 43,966 cubic yards are needed for revegetation on private lands. As indicated in Section 2.11, there is 79,281 cubic yards of topsoil available for revegetation on National Forest Lands and 44,526 cubic yards of topsoil available for revegetation on private lands.

***2,198 cubic yards are available at the Scofield site. The remainder of the topsoil will come from the portal yard stockpile or other outside source.

****5.4 acres does not include the acreage of the topsoil pile and areas not disturbed in the permit area. Plate 3.2.4-4F illustrates topsoil (~8,755 cu-yds.)and subsoil removal area. Only topsoil is included in the table although approximately 6,345 cu-yds of subsoil will be stored in the pile as well.

4.6.6 Winter Quarters Ventilation Facility Topsoil Redistribution

Topsoil redistribution will commence once removal of all facilities and modification of the pad site to achieve the approximate original contours (AOC) is completed. Distribution of the topsoil will take place immediately prior to re-vegetation activities to minimize erosion. Topsoil will be placed with a bulldozer or comparable machinery to approximate grade. Following topsoil placement to approximate grade, a trackhoe or comparable machinery will deep-gouge or roughen the surface prior to commencement of re-vegetation activities.

~~4.6.7 NOG Bleeder Shaft Topsoil Redistribution~~

~~The topsoil redistribution will start one-year after the shaft has been backfilled to allow for settling, any facilities have been removed, and the earthwork has regarded the road and pad to the approximate original contours (AOC). Re-vegetation activities will immediately follow the distribution of topsoil to minimize erosion. Topsoil will be placed with a bulldozer or comparable machinery to approximate grade, followed by deep-gouging of the surface. Mulch, matting or other best technology currently available (BTCA) will be used as a top-dressing once seed has been distributed.~~

4.6.8 Swens Canyon Ventilation Facility Topsoil and subsoil Redistribution

As with previous sites, both subsoil and topsoil redistribution will commence once the shafts have been adequately backfilled, and the area of the pad site has been roughly re-graded, subsoil will be re-distributed to achieve approximate original contours (AOC). Prior to topsoil placement, any highly-compacted areas such as roads will be ripped prior to topsoil placement. Topsoil will then be placed with a bulldozer or comparable machinery to achieve approximate grade. Once topsoil is placed, a trackhoe or comparable machinery will deep-gouge or roughen the surface. Prior to commencement of re-vegetation activities, the topsoil will be analyzed for available nutrients nitrogen, phosphorus, and potassium per DOGM 2008 guidelines to evaluate whether any soil treatment is necessary. Following seed distribution, and any remedial soil treatments, topsoil and seed will be retained using a hydro-mulch, certified weed-free straw, erosion control blankets, a combination or other best technology currently available at the time. These procedures apply to both areas associated with the vent facility and any disturbance associated with the power line installation.

4.7.9 Winter Quarters Ventilation Facility (WQVF)

Refer to both Section 2.7 and the Mt. Nebo Vegetation report located in Appendix A-2, Volume 2 for a discussion of the vegetation for the WQVF. The interim and final revegetation seed mixes for the WQVF area are listed in Tables 4.7-8A through 4.7-8C. Reclamation success standards are based on the reference area(s) identified in the Mt. Nebo report. Noxious plants invading the WQVF permit area will be controlled by hand-grubbing, and/or approved herbicides. Surveillance will be monitored annually during the liability period.

~~4.7.10 NOG Bleeder Shaft~~

~~Refer to both Section 2.7 and the Mt. Nebo Vegetation report located in Appendix A-2 Volume 2 for a discussion of the vegetation of the NOG Bleeder Shaft site. Portions of the area were previously disturbed and re-vegetated, while other portions are undisturbed. Both the interim and final re-vegetation seed mixes are listed in Tables 4.7-10A and -10B, with the areas seeded being top-dressed mulch, straw, or matting when the seed is distributed. Reclamation success standards are based on the reference areas identified in the Mt. Nebo report. Noxious weeds will be controlled during the liability period. Sediment control structures used during construction such as silt fencing and straw bales will remain in place for one year after construction and will be removed anytime thereafter. Erosion control blankets, wattles, or straw bales will be used to control erosion during interim vegetation establishment.~~

4.7.11 Swens Canyon Ventilation Facility (SCVF)

Refer to both Section 2.7 and the Mt. Nebo Vegetation report located in Appendix A-2, Volume 2 for a discussion of the vegetation for the SCVF. The interim and final revegetation seed mixes for the SCVF area are listed in Tables 4.7-11A, and 4.7-11B, respectively. Following topsoil and subsoil handling outlined in Section 4.6, seed distribution, and any remedial soil treatments, seed will be retained using a hydro-mulch, certified weed-free straw, erosion control blankets, a combination or other best technology currently available at the time. Reclamation standards are based on a combination of the reference area identified in the Mt. Nebo report, and the recommendations within the report. The area has been mapped as crucial summer range for deer and elk by the Utah Division of Wildlife Resources (DWR). Consequently, a pre-set woody species value of 2,500 plants per acre is currently proposed for a revegetation success standard at the proposed disturbed Sagebrush/Grass area. However, that may be re-evaluated at bond release if an increased percentage of forbs and grasses is determined more desirable for the post-mining land uses. A modification in the woody-species will be based on consultation with USFS, DWR, DOGM, and mine personnel. Noxious plants invading the SCVF permit area will be controlled by hand-grubbing, and/or approved herbicides. Surveillance will be monitored annually during the liability period.

Shafts

Skyline Mine does not have any shafts initiated permitting the Winter Quarters Ventilation Shaft (WQVF) in 2010. Should any be designed in the future, Rreclamation will be in compliance with State regulation R645-301-551 and consistent with MSHA, CFR 75.1771. Shafts or other opening to the surface from an underground mine will be capped, sealed and backfilled, or otherwise properly managed, as required by the Division. Permanent closure measures will be designed to prevent access to mine workings by people, livestock, fish and wildlife, and to keep acid or other toxic drainage form entering groundwater or surface waters.

Figure 4.9-B illustrates how the WQVF shafts will be reclaimed through backfilling. The bottom 50-feet of the shaft will be filled with non-combustible material as follows: starting at the bottom with large, course 6+ inch rock for approximately 20 feet (including mine area); followed by successively by smaller rock; culminating with a 5-foot bentonite layer, 5-foot concrete layer, and an additional 5-foot bentonite layer. The remainder of the shaft will be filled to the surface with pit run or other reject fill. The bottom 50 feet of the shaft has been designed to both minimize accumulation of gas and filling of the shaft with water - should either condition occur. The shaft(s) reclamation design addresses both mass stability and movement in multiple ways: grading of the fill from coarse to fine minimized movement while allowing pore space for possible saturation; the bentonite-concrete layers (~15 total feet) are utilized as both a cap and seal, providing a barrier for both saturation and mass movement; and finally, once the shaft is full to the surface, a 20-foot mound is placed over the former opening to accommodate additional compaction. The mound provides approximately an additional 5 percent of material for compaction. It is proposed the shaft be filled and allowed to settle for approximately one (1)year prior to completely reclaiming the WQVF pad to approximate original contours (AOC).

~~A shaft in the North of Graben area (NOG Bleeder Shaft) will be abandoned in the same fashion. Figure 4.9-D illustrates the abandonment. Notable differences include the diameter of the shaft (5-feet) and the depth (~1,400-feet). The shaft will not be lined and since the shaft was drilled using the raise-bore method, all the backfill material will need to be imported to the site.~~

Shafts in the Swens Canyon Ventilation Facility (SCVF) area will be abandoned in the same fashion. Figure 4.9-D illustrates the abandonment. The notable differences are the depth(s) and diameter of the shaft(s). Cuttings from the drilling of the shaft(s) will be used in the backfill at reclamation (Blind-bore). If the raised-bore method is used, all the material will need to be imported to the site.

Mine Entries

In compliance with 30 CFR 75.1711-2, seals will be installed in all entries as soon as mining is completed and the mine is to be abandoned. (See Figure 4.9-A for typical portal seal.) The seals will be located at least 25 feet inside the portal entry. The opening will be sealed with solid, substantial, incombustible material, such as concrete blocks, bricks or tile, or shall be completely filled with incombustible material. Figure 4.9-C illustrates a cross section of the WQVF seal. The WQVF seal has incorporated a water-tight seal in the event water is encountered at reclamation.

discharged from this location when discharge parameters are met. A Utah Pollution Discharge Elimination System (UPDES) water discharge point was added to the Skyline Mine water discharge permit in December 2009 to accommodate discharging water to Winter Quarters Creek both from the sedimentation pond and potentially future mine water discharge.

The Winter Quarters decline slope portal is at an elevation of 8120 feet which is down dip and at a lower elevation than portions of the Mine workings. To safeguard against a gravity discharge at reclamation, should the mine flood to the portal level, both the shafts and slope have been sealed and backfilled to prevent any discharge at reclamation (See Section 4.9).

~~4.11.10 North of Graben (NOG) Bleeder Shaft~~

~~The NOG Bleeder shaft includes a 3.0 acre bonded permit area, with approximately 1.7 acres of disturbance with a 50-ft by 80-ft pad, 784-ft road, topsoil pile, diesel storage tanks, generator, and a 5-ft diameter shaft. The site is adjacent to an existing USFS road located at the top of Granger Ridge. No pond is necessary for sediment control due to minimal disturbance. The shaft opening is located approximately 1,400 feet above the mine workings eliminating concern of any gravity discharge during the operation of the shaft.~~

4.11.11 Swens Canyon Ventilation Facility (SCVF)

The Swens Canyon Ventilation Facility included the designs of an exhaust shaft and an emergency escapeway shaft, and a drainage plan for both the disturbed and undisturbed drainage. The majority of undisturbed drainage has been diverted around the site, while the disturbed area drainage has been minimized with a number of Alternate Sediment Control Areas (ASCAs) that eliminate the need for a sedimentation pond. The shafts are located significantly higher than the flow in Swens Canyon eliminating any chance of water from the creek entering the shaft. Similarly, the shaft is approximately 900 feet above and up dip of the majority mine workings, eliminating concern of gravity discharge during the operation of the mine. See Section 4.9 for the detailed reclamation of the shafts.

TABLE 4.12-1

PROPOSED POSTMINING LANDUSE

Area	Present Ownership	Premining Landuse	Proposed Postmining Use	Alternative Use	Capacity To Support Proposed Use	Relationship To Existing Landuse Policies
Mine Site and Exploratory Excavations	USFS	Wildlife/ Grazing Habitat	Wildlife/ Grazing Habitat Picnic Area		Adequate	Compatible
Conveyor and Pipeline	Private	Grazing/ Wildlife Habitat	Grazing/ Wildlife Habitat Wildlife Habitat		Adequate	Compatible
Main Access Road	State	Forest Compatible Access and Service Road	State Road	None	Adequate	
Loadout	Private	Grazing, Picnic and Stock Pens*	Grazing/ Wildlife Wildlife Habitat		Adequate	Compatible
Waste Rock Disposal	Private	Grazing/ Wildlife Habitat	Grazing/ Wildlife Habitat Wildlife Habitat		Adequate	Compatible
South Fork Breakout	USFS	Wildlife/ Grazing Habitat	Wildlife/ Grazing Habitat Wildlife Habitat Forestry		Adequate	Compatible
James Canyon	USFS/Private	Wildlife/ Grazing Habitat	Wildlife/ Grazing Habitat Wildlife Habitat		Adequate	Compatible
Winter Quarters Ventilation Facility	Private	Grazing Mining Wildlife	Grazing Wildlife	Adequate Compatible		Adequate
~~NOG Bleeder Shaft Compatible~~	~~USFS~~	~~Wildlife~~	~~Wildlife~~	~~Adequate~~	~~Adequate~~	
Swens Canyon Ventilation Facility	USFS	Wildlife/ Grazing	Wildlife/ Grazing	Adequate	Adequate	Compatible

Revised: ~~10-13-2017~~1-2-2020

Waste Rock Site

Fish and Wildlife Enhancement Measures:
$ Species to be planted and the rates per acre will follow the specifications in Table 4.7-6A.
$ Seeds and seedlings planted during reclamation will include diverse palatable species.
$ See Section 2.9 for additional discussion of Wildlife at the Waste Rock site.

Winter Quarters Ventilation Facility (WQVF)
Fish and Wildlife Enhancement Measures:
$Species to be planted and seeded and rates per acre are outlined in Mt Nebo Report (Appendix A-2, Volume 2).
will be used in reclamation as outlined by Dr. Shiozawa (Appendix A-3, Volume 2)
• Photo documentation of the pre-disturbed stream wcollected for re-construction of the stream bank morphology
• The WQVF was specifically designed to be constructed a minimum of two (2) stream widths from the stream channel, thus providing a buffer zone of riparian and other upland vegetation to minimize impacts and maintain appropriate habitat.

• During construction, operation, and reclamation of the WQVF site, noxious plants invading the permit area will be controlled by hand-grubbing, and/or approved herbicides. Surveillance will be monitored annually during the liability period.

~~NOG Bleeder Shaft~~
~~Fish and Wildlife Enhancement Measures:~~
~~— Species will be planted and seeded as outlined in Section 4.7~~
~~— During construction, operation, and reclamation of the site, noxious plants invading the site will be controlled by approved herbicides. Monitoring and treatment will continue annually during the liability period.~~

Swens Canyon Ventilation Facility (SCVF)
Fish and Wildlife Enhancement Measures:
Species to be planted and seeded at the prescribed rates per acre are outlined in Section 4.7, Tables 4.7-11A and -11B. This will provide better wildlife habitat in the future. Any areas disturbed along the pipe line corridor needing repair after the first growing season after construction will be reclaimed in a similar manner.
No enhancement measures are necessary along Swens Canyon Creek.
During construction, operation, and reclamation of the SCVF site, noxious plants invading the permit area will be controlled by hand-grubbing, and/or approved herbicides. The areas will be monitored annually throughout the liability period

4.20.5 Winter Quarters Ventilation Facility Road

The pre-existing road in Winter Quarters Canyon is classified as an ancillary road based on the following criteria: it is not used to transport coal or spoil; it is not used for access or other purposes for a period in excess of six months; and it will not be retained for a specifically approved postmining land use. The access is primarily across private land. Although improvements to the road were made by the Mine, the improvements were included in the easement of the lease and will not be altered during reclamation.

The approximately 450 foot access road built for the Winter Quarters Ventilation Facility pad will be removed during reclamation. See Plates 3.2.4-3b and -3e for detailed road illustrations and Plates 4.4.2-3A and 4.4.2-3B for reclamation details.

~~4.20.6 North of Graben (NOG) Bleeder Shaft Road.~~

~~The NOG Bleeder Shaft access road is classified as an ancillary road since 1) it is not used to transport coal or spoil; 2) it is not used for access or other purposes for a period in excess of six (6) months; and 3) it will not be retained for a specifically approved post-mining land use. The access is located on land exclusively managed by the US Forest Service. The approximately 780-foot road built for the NOG Bleeder Shaft will be removed during reclamation. See Plates 3.2.4-5A through -5D for detailed road illustrations and Plates 4.4.2-5A and -5B for reclamation details.~~

4.20.7 Swens Canyon Ventilation Facility (SCVF) Road

Both the pre-existing and new access road in the SCVF area are classified as ancillary roads. The pre-existing road will be slightly rerouted while the SCVF is functional, but will be re-established in its original location at reclamation. The approximately 900 foot access road built for the SCVF pad will be removed during reclamation. See Plates 3.2.4-4A, and -4B for detailed road illustrations, and Plates 4.4.2-4A and -4B for reclamation details.

Formatted: Line spacing: At least 1.4 pt

CONTOUR INTERVAL: 80 Feet

2000' 0' 1000' 2000'

FEDERAL LEASE UTU-67939

FEDERAL L.M.U.

U-0147570 RELINQUISHED

U-0142235

U-073120

U-020305

U-044076

FLAT CANYON L.B.A.

UTU-- 77114

PRIVATE PROPERTY

ENERGY WEST LEASE

Carbon County

SANPETE CO / CARBON CO

SANPETE CO / EMERY CO

CARBONCO / EMERY CO

USFS BOUNDARY

MINING PERMIT

PERMIT BOUNDARY AND DISTURBED BOUNDARY LINE

C&B Energy

Winter Quarters Ventilation Facility

Scofield

Access Road

Waste Rock Disposal Site and Road

SCOFIELD RESERVOIR

SCOFIELD LAKE STATE RECREATION AREA

Portal Yard

Snow Storage Pad

Conveyor Bench

Water Tank

South Fork Breakout

Dewater Drill Site

JAMES CANYON ROAD

ABANDONED COUNTY ROAD AND BURIED PIPELINE

LOCATION OF UNDERGROUND POWER TRANSMISSION LINE DISTURBED AREA (REFER TO DWG 1.6-3A)

BURIED POWERLINE IN FDR-018

PERMIT BOUNDARY AND DISTURBED BOUNDARY LINE ARE SHOWN LARGER THAN THE ACTUAL BOUNDARY FOR ILLUSTRATIVE PURPOSES ONLY

PERMIT AREA	SITE DESCRIPTION
13.86	RAIL LOADOUT
42.55	PORTAL YARD
0.60	WATER TANKS & WELL PADS
0.60	SOUTH FORK PORTALS
14.18	CONVEYOR BENCH
32.48	WASTE ROCK DISPOSAL SITE
7.93	WINTER QUARTERS VENTILATION FACILITY
4.90	WINTER QUARTERS ROAD (not reclaimed)
1.60	JAMES CANYON BURIED PIPELINE
0.30	JAMES CANYON BURIED POWER LINE
2.95	JAMES CANYON WATER WELLS AND ROAD
3.00	NOG Bleeder Shaft
14.50	Swens Shaft and Power line (powe line not reclaimed)
139.45	

LEGEND

ADJACENT AREA: Areas Authorized for Coal Mining and Reclamation Activities (SEE CHIA FOR HYDROLOGIC ADJACENT AREA)

PERMIT BOUNDARY

LEASE BOUNDARY

NOTES:

1. COORDINATE BASE ON MINE GRID DATA.
2. MAP DIGITIZED FROM 1:24000 USGS QUADRANGLE MAPS, SCOFIELD, UTAH AND FAIRVIEW LAKES, UTAH.
3. MINE FACILITY, CONVEYOR, AND NEW ECCLES CANYON ROAD LOCATIONS FROM EXISTING RECORD DATA AND INCORPORATED TO MAP IN BEST FIT LOCATIONS.
4. UTM GRID TICK VALUES SHOWN ARE IN METERS.

LEASE ACREAGE WITHIN ADJACENT AREA

FEDERAL COAL	ACREAGE
U-0147570	1532.70
U-0142235	520.0
U-073120	557.22
U-044076	2489.32
U-020305	279.40
UTU-67939	4061.52
UTU-771114	2692.16
TOTAL	12,132.32

NON-FEDERAL COAL	ACREAGE
C&B COAL	120.00
CARBON COUNTY	811.25
ARK LAND COMPANY	240.00
Cunningham / Tracy	346.68
TOTAL	1,517.93

NOT ALL ACREAGE FOR EACH LEASE IS WITHIN THE PERMIT BOUNDARY, REFER TO PART 1, TABLE 1.114.

ADJACENT AREA SITE DESCRIPTION:
Active Lease Areas, Permit Boundary, and 1/2 Mile beyond Waste Rock Disposal Site

13,525 ACRES SITE PERMIT BOUNDARY

BASE PREPARED BY INTERMOUNTAIN AERIAL SURVEYS, SALT LAKE CITY, UTAH – M96147

DATE	No.	REVISIONS	DR. / CHKD.
AUG 02	1		/VSM
NOV 02	2		/VSM
JUNE 07	3	MODIFIED PERMIT BOUNDARY (IBC & WASTE ROCK) SKYLINE MINES PERMIT AREA, LEASE AREAS.	BR /GG
MAR 2010	4	ADDED ADJACENT AREA, MODIFIED PERMIT AND LEASE BOUNDARIES	AB /GG
JUL 2010	5	ADDED WINTER QUARTERS ACCESS ROAD	AB /GG
AUG 2010	6	MODIFIED ADJACENT AREA	AB /GG
OCT 2012	7	Modified Adjacent Area with Lease Mod. and Relinquishments	GG /GG
July 2014	8	Corrected permit boundary to include water line from Tanks	GG /GG
April 2015	9	Added the NOG shaft pad	TE /GG
May 2016	10	Added Swens shaft pad and power line	JA /GG
Dec. 2016	11	Added Flat Canyon Lease – UTU-77114	JA /GG

DATE	No.	REVISIONS	DR. / CHKD.
Oct 17	12	Removed South Fork Road	TE /GG
1/2/20	13	Removed NOG shaft	TE /GG

SKYLINE MINE PERMIT AREA

Canyon Fuel Company, LLC
Skyline Mines
HC35 BOX 380, HELPER, UTAH 84526
435-448-6463

SCALE: 1" = 2000'	DATE: 9/24/01	CK.BY:G. Galecki	REVISION: 13
DWG. NO.: 1.6-3		DR.BY:JCA	1-2-20
CAD FILE: 1.6-3REV12			

WQ Sagebrush/Grass Reference Area
(Mt Nebo 2009)
0483269.0E 4396792.0N

WRS Sagebrush/Grass Reference Area
(Mt Nebo 2007)
0487171.0E 4396454.0N

WRS Aspen Reference Area
(Mt Nebo 2007)
0487346.2E 4396541.1N

Portal, Rail Loadout, Conveyor, South Fork
Aspen Reference Area
(R1 Welsh 1980)
0481171.8E 4393242.0N

Portal, Rail Loadout, Conveyor, South Fork
Spruce/Fir Reference Area
(R2 Welsh 1980)
0480857.9E 4392226.2N

Swens, Powerline
Aspen/Grass Reference Area
(Mt Nebo 2015)
0481373.4 4390836.8N

Swens, Powerline
Conifer (Spruce) Reference Area
(Mt Nebo 2015)
0479920.0E 4391013.0N

Swens, Powerline
Sagebrush/Grass
Reference Area
(Mt Nebo 2015)
0478660.5E 4390633.9N

Portal, Rail Loadout,
Conveyor, South Fork
Riparian Reference Area
(R3 Welsh 1980)
0480163.7E 4389051.4N

Portal, Rail Loadout, Conveyor, South Fork
Sagebrush Reference Area
(R3 Welsh 1980)
0480359.5E 4389219.3N

James Canyon
Aspen Reference Area
(Mt Nebo 2001)
0481924.7E 4388634.2N

Winter Quarters Ventilation Facility

Swens Canyon Ventilation Facility

Portal Yard

Conveyor Bench

Loadout

Access Road

Waste Rock Disposal Site and Road

South Fork Breakout

James Canyon Road and Dewater Drill Site

SEE PLATE 1.6-3 FOR PERMIT AND ADJACENT AREAS

LEGEND

REFERENCE AREA*

PERMIT AREA

*For detailed information on reference area locations and boundaries, see studies in Appendix A-2; Volumes 1 & 2

NOTES:
1. COORDINATE BASE ON MINE GRID DATA.
2. MAP DIGITIZED FROM 1:24000 USGS QUADRANGLE MAPS, SCOFIELD, UTAH AND FAIRVIEW LAKES, UTAH.
3. MINE FACILITY, CONVEYOR, AND NEW ECCLES CANYON ROAD LOCATIONS FROM EXISTING RECORD DATA AND INCORPORATED TO MAP IN BEST FIT LOCATIONS.
4. UTM GRID TICK VALUES SHOWN ARE IN METERS.

BASE PREPARED BY INTERMOUNTAIN AERIAL SURVEYS, SALT LAKE CITY, UTAH - M96147

DATE	No.	REVISIONS	DR.	CHKD.
5/4/2016	1	Correct reference sites from all areas	JA	GG
12/20/2019	2	Correct reference sites GPS coordinates	TE	GG
1/2/2020	3	Removed NOG shaft	TE	GG

VEGETATIVE REFERENCE AREAS

Canyon Fuel Company, LLC
Skyline Mines

HCR 35 BOX380, HELPER, UT, 84526
435-448-2632

DATE: 5/02/2016 | CK.BY: G.GALECKI | REVISION: 3

CAD FILE: | SCALE: FULL | DR.BY: J.ARMSTRONG

DWG. NO.: 2.7.1-2 | 1/2/2020